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No. 15.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

NOT ENTHUSED OVER EUCALYPTUS.

Mr. Pryal's talk and pictures about the eucalyptus trees (page 129) are very interesting indeed; and yet I do not find myself getting *enthused* about them much. If a tree looks like a beanpole, and if we have to say to a fellow, "This is an excellent medicine," in order to make him eat the honey, 'pears like that bee-folks might go further and do better in the matter of tree-planting.

FEEDING EVERY TENTH HIVE.

Page 132. What shall we say about Mr. Aldrich's plan of feeding every tenth hive, and making the bees store honey for the other nine? I should have doubts about their doing so much storing readily, and fears that bees so overworked in the fall might "peter out" before spring. Still, I am conscious that these may be empty and needless apprehensions. I don't *know* much about it.

A TRICK OF THE HONEY-COMMISSION MEN.

There is an idea dropt by Mr. McNay, on page 132, that we can hardly afford to let slip. Send a commission man honey outright and he puts it in the back part of the store, to sell when he gets other things cleared up. Make him pay you a good advance on it, and (just as naturally) he sets about selling it at once, because he wants to get his money in hand again. See? Quite honest men have been known to look out for their own interests, don't you mind?

FREQUENT FLIGHT-DAYS AND GOOD STORES.

You're just like all the rest of us, Comrade Dadant; crowing loudly before we're out of the wintering woods. Frequent flight-days are indeed the best thing we can possibly have to get thru the winter on, *except one*. And that one thing is "pizen on us" this winter. Not for many years has the quality of the winter stores been so poor as this time. If spring should prove late and trying many of us will suffer, I fear. Good plan to count our mercies, however. Had this winter been as destitute of flight-days as some winters are, many localities would scarcely have had a bee left by this time.

A QUEEN'S SPRING EGG-LAYING.

Whoever has stood before a tired audience, burdened with the duty of interesting them notwithstanding their weariness, can sympathize with Mr. Doolittle as he began the brilliant address reported on pages 133, 146 and 165. We're all glad that the "scare streaks" up his legs didn't make him sit down. When a really competent lecturer talks

on the rudiments of a thing he is pretty sure to let out some facts which those advanced in the art can feed on with interest. Probably not one in a hundred of us knew that the queen begins in the spring by laying about ten eggs a day for awhile. If Cogitator had been driven to a Yankee guess he would have guest about half-a-dozen eggs the first day, and a couple of hundred the second. But of course Doolittle is right. In the observation of little things he is one of the most accurate observers.

DIFFERENCE IN TASTE OF HONEY.

As to the question of the taste of Italian honey *vs.* the taste of the other kind, which Mr. Bevins sails into so valiantly (page 134), 'Tater would incline to go further, and deny the alleged facts *in toto*. Different races, strains and colonies differing in pretty much every imaginable way, now for the better, and now for the worse, the bees a fellow is enthusiastically in favor of store (of course) the best-tasting honey for him. That was a sharp shot of B.'s where he reminds his antagonist that very many flowers hang bottom side up, so the heaviest nectar would settle into reach, instead of out of it, if any such separation went on.

PROOFS OF GENUINENESS (!).

In the ninth boil-batch page 138, Holtermann hits the bull's-eye (or say the cow's) with that milk story. Leaving propolis on the sections to prove genuineness next door to proving butter by the hair in it—and milk by that cow-dung flavor often gently alluded to as the "taste of the barn."

ODOR OF TAR FOR FOUL BROOD.

Won't do to trust one swallow for a summer, but if many swallows get the same results as Loyalstone, on page 138, we shall have something new of distinct value in fighting foul brood. Just powerfully impregnate wax designed for foundation with the odor of tar.

THAT "EAR-WAX FOR STINGS" STORY.

Ear-wax the best remedy for stings, eh, only so apt to be unattainable. Page 140. Let me suggest, Mr. Hermance: If all the bee-folks should warm your ear, by telling you what they think of your whisky remedy, it would melt out wax enough to give you a start in the ear-wax supply trade.

THE QUESTION OF FACING HIVES.

That boy Miller, on page 166, was being switcht not for facing hives the wrong way, but for teaching that the direction made no difference. And, lo, he thinks to get off by showing that a big bee-man (the biggest one of all, in fact) considers facing quite important. No, my boy, if you could get Doolittle and Cogitator to play the two-ram act, that wouldn't help you any. Furthermore the chances are that they won't butt. Doolittle lives in a very cool climate, high altitude, and pretty well north; and if he decides that the days when sunshine right square in front does harm are so very few that the days when direct sunshine does good greatly overbalance them, 'Tater won't deny it. And if 'Tater finds very few summer days when the sun after 11 is any good, and many days when it is a sweltering nuisance, I don't believe Doolittle will put down his wooly pow and

charge. Whole thing a matter of climate. Nobody in the North has any good word for a north facing; but presumably in Cuba (if hives had to be left awhile without shade) north facing would be the only proper way. The matter is very simple indeed. To get the morning sun and not much else, face east. To get the most sun possible, face south. To get the least possible, face north. If your honey mostly comes in afternoons, and afternoons are apt to be too cool, face west.

MR. GETAZ PROBABLY TWICE CORRECT.

Cogitator agrees with Adrian Getaz, page 145, that dead bees in the outer spaces, in out-door wintering, are dead of cold—rest of the world to the contrary notwithstanding. And quite possibly Mr. Getaz is correct in calling stimulative feeding and brood-spreading two equivalents, either one of which may be used, but not necessarily both at once. 'Tater's a little shy of both.

BRUSHING HONEY INTO COMBS.

Another way to get honey into empty combs for feeding purposes—brush it in with a paint-brush. Maybe now that's a good idea. Thanks to Mr. Bair, page 148.

MARKETING HONEY—PECK'S PECK OF TROUBLE.

Mr. Peck's peck of trouble, on page 149, is one where-with many of us have been peckt—good local sale-route patiently workt up (8 cents a pound), and, presto, a youngster strikes in at 7 cents. The satisfactory remedy is rather hard to find. Mr. Peck thinks "educating him" with bee-journals, etc., only makes him worse—surer than ever that he can get rich on 7-cent honey. Whatever we do, let's not get mad and hate the boy in our hearts; he's only at what the world calls "business." I put my retail figure at 7 cents years ago, and the 6-cent boy has not yet turned up. If he should, my honey would be 6 cents directly. I admire, rather than hope to imitate, the once-a-year visited route, and the uniform 25-pound package. Too late to make my route stand that now, sure. Smaller packages and more frequent visits are more to the mind of the average customer; and once-formed habits do not change easily to habits a little less agreeable.

30,000 TONS OF COMB HONEY.

Honey statistics (in this country at least) are apt to be disgustingly unreliable, and far off from the truth; but when the big makers can be got to report how many sections they made we have *something* to tie to. The 30,000,000 that Wisconsin made is a big lot. If we may credit all the rest of the Union with as much more, we have an indirect hint of 60,000,000 pounds of section honey. Page 152.

DEFECT IN MICHIGAN'S FOUL BROOD BILL.

That Michigan Foul Brood Bill looks excellent in the main, but seems to have one gross fault. The minimum of punishment under it is a 50-dollar fine; and this can be inflicted on a person not to blame at all, only densely ignorant. Better split things. The 50-dollar minimum just so as it ought to be for the man who resists the inspector; but for selling foul-broody bees or honey better let the court decide just what the measure of guilt is, and not compel injustice by a minimum. COGITATOR.

The Omaha Convention Report ran through 14 numbers of the Bee Journal, beginning with the first number in October, 1898. Now we have on hand quite a number of complete sets of that report, which we will mail for just 10 cents each. That is, 14 copies of the American Bee Journal for only a dime. There are doubtless a good many of our new readers who will be glad to get that fine report.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for \$1.25, or club it with the Bee Journal for a year—both for only \$2.00.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

CONTRIBUTED ARTICLES

Poor Stores and Want of Air Cause Loss.

BY WM. M'EVROY.

MISS FANNIE C. DAMON, Middlesex Co., Mass.
Your letter of answers to my questions was received some time ago, and I will now give you my opinion of the cause of the sudden death-rate of your old bees in the winter, and the unhealthy condition of your colonies in the fall. Want of air in winter and poor stores in the fall were the causes of all your loss of bees.

The closing of the entrances of your colonies with ice and snow in February, 1898, was a very serious matter, because it left the bees to depend entirely on what air they could get thru the packing on the tops of the brood-chambers. When I read of the large death-rate of bees among your colonies—all dead in six, and only a small quantity alive in the other 11 hives—I felt certain that you had too much weight on the "safety valve"—too much close packing on the brood-chambers, when the entrances of your hives became closed air-tight with ice.

To make sure that I was not mistaken, I wrote to you asking how many inches of packing you had on each brood-chamber, and what it was composed of. When you answered saying that you first put on a covering of burlap, and on this a woolen mat, then an oats chaff cushion five inches thick, and above this from two to five inches of leaves, which made the tops of the brood-chambers almost air-tight, I knew well that it would not do to let the entrances become closed solid with ice and frozen snow, and remain in that condition for several days with so much packing on top of the hives, because the steam that would arise from the breath of the bees in that fix would dampen the packing above, soften the capping on the sealed stores, thin the honey in the unsealed cells, and injure the keeping qualities of a part of the honey, and particularly so with honey gathered from fall flowers.

Miss Damon, I see by your letter before me, that while your hives were bankt up with snow in February, 1898, it rained until it filled the snow with water, and then froze the snow solid with a crust of ice on it strong enough to bear up a horse, and after that everything seemed to be as hard as adamant. Very true, and that same very extremely cold dip froze the damp packing above the bees, and closed the entrances with ice and snow, and then the bees began dying by thousands for the want of air.

As you say, you had been for years very successful at wintering bees, and I don't wonder at it because you not only gave your bees plenty of stores to winter on, but had taken the greatest of pains to pack your colonies in first-class order. If you had only thought of it and kept the entrances to all of your hives clear, so that the bees could have had plenty of air, your colonies would have wintered just as well as the others had done in the past.

In reading over your letter of answers to my questions, I find that you prove my opinion to be correct as to the cause of your loss of bees in winter, and the dwindling in spring, when you say, "But the only colony of mine that came thru safely was in a cooler place, and not so bankt with snow, and had more ventilation at the back of the hive, as the loose bottom-board had become warpt." Ventilation was the very thing that saved that colony, and it was a pity that your other colonies did not have as much ventilation as that one.

Now about the combs with honey, which you took such pains to save so nicely and so well. Very few of our best bee-keepers would have thought of that. I was anxious to know if your bees had not gathered considerable honey from fall flowers in 1897, which I believed they did. You replied, saying, "The bees did gather a great deal of fine thick golden-rod honey in the fall of 1897." The keeping qualities of the different kinds of honey in the comb varies a great deal when exposed to dampness. Some will keep in fair condition under trying circumstances for six months, while some other kinds of honey won't keep as good for three months if exposed to the same amount of dampness. Some of the combs which you took out of the dead colonies had more or less of the honey in them, which your bees gath-

ered from fall flowers—a class of honey that doesn't keep as well as clover after the bees almost wintered on the combs that it was in.

If these combs had been mine, *I would have extracted the honey out of every one of them*, right after I took them out of the hive, and then heated the honey until a good waxy foam raised on top of it; after skimming it I would have fed the honey to the bees *in the evenings* when the bees were gathering little or no honey during the day. The bees would have fed the most of the honey direct to the larvæ just then, and by steady and regular feeding at such times the most of the old honey would have been profitably used up, a very much larger quantity of bees reared, and not one cell of dead brood would be found in any colony during the time the feeding was going on.

Miss Damon, it is my opinion if you had extracted every particle of honey out of every comb last spring, before you used any of the combs, your colonies would have been all right last fall. When your bees began dying at a rapid rate last fall, a prompt removal of every comb for combs with better stores is what should have been done, and if these could not have been had, I would have crowded the bees on a limited number of nice empty combs and then fed them plenty of granulated sugar syrup until they filled them and sealed them over nicely, and then all would have been right.

Woodburn, Ont., Feb. 27, 1899.



Wax-Secretion, Etc.—A Reply to Cogitator.

BY R. C. AIKIN.

ON pages 2 and 3 appears an article from myself in which I referred to comb-building and wax-secretion and their effect on the yield of surplus. I referred to certain doctrines that have been commonly accepted in the past as correct, tho now largely disbelieved, viz.: That 15 to 25 pounds of honey are consumed, over and above that which would otherwise be, for each pound of wax made into comb.

I also said that I did not believe that so much was lost to the bee-keeper, but "that all normal colonies, when gathering nectar and ripening and storing the same, secreted more or less wax regardless of the need of it," inferring that it might be as well to let the colony build some comb. I further said that "a 10-frame hive, Langstroth size, takes nearly two pounds of wax to construct its combs. Surplus honey from the same hive to the amount of 25 pounds means about three pounds of wax secreted, which, at the ratio of 15 of honey to one of wax, means 45 pounds of honey consumed in comb construction."

I also said, "the brood-combs should contain not less than 35 pounds" (which is surely very reasonable, for I have known 10-frame hives, when full, to contain over 50 pounds of honey), "which, added to the 25 pounds of surplus received, would make 60 pounds." Is there any over-drawing or rash statement in that? There is a plain statement that a colony has built all its comb and stored 60 pounds of honey.

Now, if it be true that the wax used in these combs would cause the consumption of 15 pounds of honey to one of wax produced, then surely the colony, if no wax was secreted or comb built, but instead had been given all combs needed to receive all they gathered, that stock of honey must at least equal the 60 pounds plus all consumed to make wax (comb).

I have a large solar extractor. I once cleaned this and loaded it with 100 Langstroth combs, putting in frame and all. After removing the wax and refuse, the solar was again loaded with 100 combs as before. These were nearly all natural combs, and yielded about 18 pounds of wax to the 100. I do not know how much wax was in the refuse, nor how much soaked into those 200 brood-frames, but surely some. This corroborated the statement of others, that about two pounds of wax would build comb in 10 Langstroth frames.

Since the publication of that article, on pages 2 and 3, I have made two more experiments. Honey from 25 sections $4\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{2}$, and full separated, was cut out and melted, and a second 25 treated likewise. I neglected to put down the figures, so I have them somewhat indefinitely in my mind, but I remember distinctly that one lot gave me 17 pounds of honey, and the other a little more—I think it was 18 or 19 pounds—and of wax one gave 14 ounces, and the other either a little more or a little less—I think a little more.

The section experiment shows clearly that very close to one pound of wax is used to hold 25 pounds of honey. This

is fully in line with the two pounds to 10 Langstroth-frame combs. Counting the necessary waste in the melting of the 100-comb lots, I should say that my estimate of three pounds of wax in the brood-chamber and a 25-pound surplus of section-honey stored as indicated in that former article, was not overdrawn one bit. And more, the addition to the 60 pounds of 45 more represented in the wax (105 in all) should represent the honey gathered by that colony if the 15-to-1 theory is correct.

I further stated that if it was true that bees were kept from fielding to secrete and manipulate this wax, that an additional amount must be lost in that way, and I guest that at $\frac{1}{2}$ the total honey gathered, putting it at $\frac{1}{2}$ of the 60 pounds, whereas it should have been $\frac{1}{2}$ of the 105 or more. According to the basis of figuring used, I said, "A swarm hived and building all its comb and yielding a 25-pound surplus, should, if given all the comb it could use, have yielded, in addition to the 25 pounds, 65 pounds more—a total of 90 pounds of surplus."

At the bottom of page 81, and top of page 82, Cogitator makes an unfair reference to me, and misrepresents what I said. I did not say "that 25 pounds of surplus comb honey means three pounds of wax secreted," and I hereby demand that Cogitator come down on his knees and receive his just reward, and that hereafter he will not set me up in such a light as he there does.

A certain preacher wisht to condemn a certain fashion in hair-dressing, and took for his text, "Top-knot come down;" whereas the whole text was, "Let him that is on the house-top not come down," etc. To take detach sentences, and sometimes even paragraphs, would make any of us appear as fools.

No, sir, Mr. Cogitator, I stick to it that 10 Langstroth combs and 25 pounds of section honey represent just about three pounds of wax. You admit that "the current ratios should be hauled down a long way," so we will haul it down to $8\frac{1}{2}$ instead of 15, and still the case I supposed would give 50 pounds instead of 25, which ratio your humble servant would haul down at least by another $\frac{1}{4}$.

Now suppose the colony to be an old establishment one, having all its brood-chambers full of combs, only that in sections to build. Take your own figures of one pound of wax to 20 of honey, and let us figure some more. If a pound of wax costs five pounds of honey, then the ratio as between that stored when comb is built, and when no wax-secretion is necessary, is 20 to 25. At 10 it is 20 to 30; at 15, 20 to 35; at 20, 20 to 40. I will take the 5 to 1 as the nearer correct of any of them, and if you or any other cogitator can prove me wrong, just pitch in.

Beware that you do not fall into the error of accusing me of saying that there never are conditions under which the yield as between comb and extracted will not exceed the ratio of 4 to 5, but as far as wax-secretion alone concerns the question I challenge you to prove that I am not right. I have repeatedly made this challenge—or one very similar—and in something like two years it has not received an attempt at answer.

Come over some evening, Mr. Cogitator, and we will play checkers and talk bees, and have a good old bee-convention. Will you come? Larimer Co., Colo.



The "Long-Idea Hive" and Its History.

MR. YORK:—I would like to ask in regard to the hive Mr. Poppleton uses. What is the size of the frame, and how many does he use for extracting? I have a few one-story hives with frames $11\frac{1}{2}$ inches deep and $12\frac{1}{2}$ long, with 16 in a hive. Would you consider it a good hive for extracted honey? There is no surplus arrangement on top of this hive, the honey to be extracted from the outside brood-frames.

F. EATINGER.

[We referred the foregoing questions to Mr. Poppleton, who kindly replied as follows:—EDITOR.]

EDITOR YORK:—At your request, I will try to answer Mr. Eater's questions.

The frames I use are what is commonly called the "American frame," said to be 12 inches square, but mine are actually $11\frac{1}{2} \times 11\frac{1}{2}$ inside measure, being practically the same as Mr. E. has. In my opinion a shallower frame than these should never be used in single-story work.

Sixteen frames are not enough. My hives will hold 24 frames each, with a thin division-board in each end. One of the advantages of this method of working bees is that

the number of combs in use can always be adapted to the size and needs of each colony. When working with my bees, I almost always have empty combs within reach, and to every colony I find with too few combs I add as many as are needed, be it one or more, and take away from any that have more than they need.

My colonies occupy all the way from 3 to 24 combs each, according to their strength, but I consider one that needs only 16 combs during the honey season as not being up to standard.

If I were again to keep bees in Iowa, and not practice migratory work, I should use hives that would hold three or four frames more than do the ones I am now using.

The Long-Idea hives were referred to in "Beedom Boiled Down," in your issue for Nov. 10, 1898, also a statement from Mr. Gallup that the two he tried were comparative failures. See article in Gleanings, page 13, of last year, for a history of these hives, origin of the name, and also reason why Mr. Gallup failed with them. The Gallup frame is not suitable for working in that manner, his own method of using that particular frame being the best.

Dade Co., Fla., March 28.

O. O. POPPLETON.

[The article in Gleanings, to which Mr. Poppleton refers, reads as follows:—EDITOR.]

On page 634 of Gleanings for Sept. 1, Mr. Doolittle gives a version of the history of "Long-Idea" hives, and some remarks on their use. While the history of the origin of any of our implements or ideas may be interesting, they are, of course, not of practical value; but I feel very much like trying to correct the historical part of Mr. Doolittle's remarks.

About 1870, Gen. D. S. Adair, of Kentucky, devised and (I think) patented what he named the "New-Idea" hive. This hive was a long single-story one with the entrance in one end, at the side of the frames, instead of the ends, as commonly practiced. The "new idea" of the General was, as I understood it, having the combs containing brood all in the back end of the hive, with surplus honey arrangements all between entrance and brood, compelling the bees to pass thru the surplus honey part of the hive to reach the brood, instead of thru the brood-nest to the surplus honey, as in tiered-up hives.

I do not know who first changed from Gen. Adair's end entrance to having an entrance in the side of hives, and brood-nest in the center instead of in the back end; but I think the change was made and experimented with by a good many of us at the same time. It was not Gen. Adair, who gave the name "Long Idea" to the hive. I have always thought the name was first given to it in derision; but as no other yet used describes the hive so well, it has become the recognized name.

The discussion over these hives occurred when I was first starting my apiary in Iowa; and after trying both styles for a year or two, I adopted the long single-story hive, and still use it, not having a single double-deck hive in my apiaries. I used about 500 double-story hives for two years in Cuba, and was very glad to return to my own style. I would no more think of using a two-story hive for extracted honey than Mr. Doolittle would think of using the single story.

The truth is, Mr. D. probably has no knowledge of a properly made single-story hive. Neither the Langstroth nor Gallup frames can be successfully used in such manner. To use the right amount of combs in either of those frames will spread them out too much—doesn't leave them in as compact a form as they should be for successful use. I have told a great many bee-keepers who askt my advice, not to attempt to use shallow or small frames in such a way. Some of the foreign bee-journals, according to a review of them by Mr. Thompson, have lately been discussing this matter quite fully, and the conclusions they arrived at were similar to my own—that only deep frames were suitable for use in such hives.

Let me review Mr. Doolittle's objections very briefly. I can work a single-story hive much easier than a double story. The extra depth of my frame, and a little higher stand makes the top of the hive the same height from the ground as the top of a two-story Langstroth. I shake my bees inside, not on top of my hives, and avoid the trouble of crawling bees he speaks of. If I remember rightly, I used to be as successful as the average of bee-keepers in wintering my bees in Northern Iowa, and I used the long hive entirely, Mr. D.'s non-success with only two hives to the contrary notwithstanding.

O. O. POPPLETON.

Dade Co., Fla., Nov. 18, 1898.

CONVENTION PROCEEDINGS

Report of the Chicago Bee-Keepers' Convention.

BY A SHORTHAND REPORTER.

[Continued from page 214.]

GETTING THE PUBLIC TO EAT HONEY.

QUES.—What can be done to get the public to eat more honey?

A Member—Sell them better honey.

Dr. Miller—There is much in that. At one time I had some very poor honey-dew—miserable stuff. I put it on the market and insisted people ought to buy it because it was honest honey, gathered by the bees. I hurt myself greatly by that. If you want people to eat honey, you must give them good honey. There is a great deal of very poor extracted honey put on the market; I don't blame people for not liking it; if they get good, ripe honey they will use more of it. The quality of the honey has a great deal to do with the public consuming a large quantity. Give them a good article and they will like it and use it. There is some honey so poor that they ought not to like it; then there are other things, and we might take up the whole afternoon arguing on this, and I would advise you to suggest thru the American Bee Journal any time what you may have found to help increase the consumption of honey; but you will find that a great deal lies in giving the public a good quality of honey.

Dr. Peiro—There is another reason for it; the chief reason is, people don't know anything about honey. Where can you get it? What does it cost? Many such questions are askt about honey. People don't read the bee-papers, and they are the only journals that say anything about it. It needs some stirring up—some advertising. I don't see many advertisements; in fact, the honey is all right if the people only knew it was all right.

Dr. Miller—It is not all right. Some of it is unripe.

Dr. Peiro—I mean honey; I don't mean fraud honey. I don't care what you have to dispose of, if you don't advertise it in some way you are going to "get left." I think the problem to-day is, how to reach the public. You will not sell it unless you interest the public in it.

MAINTAINING A CERTAIN NUMBER OF COLONIES.

QUES.—If you have a field that will normally support 100 colonies, and we call this a working capital—during a series of years how near can this working capital be maintained?

A Member—If I understand the question, I should say it can be entirely maintained.

Dr. Miller—The question is, how nearly can it be maintained?

Pres. Beers—A hundred colonies ought to keep 100 colonies going.

Dr. Miller—If it will normally support 100 colonies, how nearly can those 100 colonies be maintained? As I understand it, how long will it take to run out this 100 colonies? With proper management I should say those 100 colonies ought to be kept up year after year. You hear it spoken of sometimes as bees running out. Here is a man that had so many colonies, and got along so and so for a number of years, and then run out; but I think with proper management in breeding, 100 colonies, without any fresh blood being thrown in, might be kept up.

Mr. Moore—Dr. Miller, take the 100 colonies you had in 1888, how near has that 100 colonies maintained itself without outside money of yours put in for any purpose up to now, good and bad years?

Dr. Miller—I think I partly understand you, it has partly supported myself and family.

Mr. Moore—That 100 has given a net income of so much a year?

Dr. Miller—They have given something, certainly. I don't mean that the 100 colonies supported myself and family—they couldn't do it; but that 100 colonies as a working capital will give an income.

A Member—It will average for 10 years an income?

Dr. Miller—Certainly; it has for 35 years.

WHAT ABOUT APIS DORSATA?

QUES.—Do we want the importation of the *Apis dorsata* from the new American territory—the Philippines?

Mr. Hammersmark—I think if we were familiar with it we would want it. I think we would all vote for it if it had a longer tongue and could be domesticated.

QUES.—If they build only a single comb would it be worth while? Would they build a number in a hive?

Dr. Miller—I don't know, unless you get them under stress in the hive to do differently; that is what they do left to themselves.

Dr. Peiro—I would like to ask if the long tongue is all they have in their favor?

Dr. Miller—There might be a decided advantage in this because of the red clover; it certainly would be a desirable thing where the red clover is plenty, to have a bee that could get the honey from it. If *Apis dorsata* can be domesticated, there would be a gain; but if it cannot be domesticated, or cannot live even tho it should be brought into this country, it would be no gain; because even tho it could be domesticated it might not be able to stand the climate here.

A Member—If it is a fact that they are very heavy wax-gatherers, would they not be absolutely useless to us? They would be all right for the extractors, for those that extract honey, but not for the comb-honey producers.

Dr. Miller—You think the comb would be too heavy?

A Member—I don't believe you could get enough honey from them, and you would have to sell it at a lower price. It would not be as good for eating purposes. You would have to gather the wax up and put it at the side of your plate. They might be all right in this country for those that run for extracted honey alone, but for comb honey, what I understand of them, they would be perfectly useless.

BOARD OR CUSHION OVER FRAMES IN WINTER.

QUES.—What is best, a board or cushion over frames in winter?

Dr. Miller—That depends a little upon what there is above the board or the cushion. Perhaps taking it in general, the cushion may be better. There may be at the present day a tendency to have a single board cover over the bees; the objection to that is, that it is cold; that the heat is conducted away from the bees thru that single thickness of board, and really we need a different hive-cover from what we have—one that has a thin board, and something like an air space. There are some advantages in having a single board cover, and perhaps there are so many that it is better not to use the cushion at all; a great many don't use it, because you can have it summer and winter the same; but as far as bees are concerned I suppose there is an advantage in the cushion, as it is a better non-conductor, and if you have it so the air can get thru, the moisture will escape and not be condensed in the hives. So in answering that, which is the best, I should say the cushion is the best thing if only the comfort of the bees is to be considered, but there are so many other things in the case that I prefer to have a board cover, and my bees are all covered with board covers now.

COLOR OF HIVES IN SUMMER AND WINTER.

QUES.—Would it be advisable to have your hives black in spring and fall, and white in hot weather?

Dr. Miller—Possibly. In the spring and fall you want to get the heat from the sun, and the black will absorb the heat better than the white; and in the hot days in summer you will have the white to keep the hives cool. If you have the hives in a dense shade, it does not matter much what the color is. If you have them out in the sun, there would be a decided difference, but if well shaded there won't be that difference. Many think that if you have your bees in dense shade then you will have them cool, and there will be no danger of combs melting down. The most combs I ever had melt down was in a place where the sun didn't shine all day long.

Mr. Moore—Mr. G. M. Doolittle has a building arranged for ripening his comb honey; he has it painted black, with a southern exposure, and he is able to keep it at an even temperature for weeks. Black is the highest absorber of the sun's rays, white the least. Black takes it all in; white glances it off.

Mr. Clark—What is the thickness of his walls? If the walls were double thickness, take a one-inch board painted black, then fill in with sawdust or packing, then a board inside of that. I could imagine the black retaining the heat and causing an even temperature; it must be specially built, painted black, to keep that even temperature.

Dr. Peiro—Practically, does it pay to paint the hives, say twice a year? Is the amount of paint required more than offset by the good it may do?

A Member—Doesn't that fool the bees when they get into a white hive and then a black one?

Dr. Miller—So far as fooling the bees is concerned, you need not count on that, because you paint them at the same time. The other is practically a question we have to meet. Is it a desirable thing to paint the hives? If I lived in Cook County, the probability is that I would have all my hives painted; but I live far out in the country, and don't have my hives painted.

Mr. Moore—How are they shaded?

Dr. Miller—Some of them are shaded, some of them are out in the sun; if trees would never die they would all be shaded. Mr. Doolittle thinks he is very sure about it, that he would not have his hives painted if you would pay him, because he thinks the bees are better off in unpainted hives. I think he is right, but I don't feel as sure as he does.

A Member—Don't you think the construction of the hive has much to do with whether they are painted or not painted? Some hives are only single wall; some double; the double are better painted than not painted.

Dr. Miller—Perhaps there may be something in that; I can't say. I don't know that it would make any difference to the bees whether double-walled hives were painted or not. So long as you are talking about single-walled hives I would not have them painted.

Mr. Moore—I have experimented a little this summer, and I am dead sure what I want, but I don't know how to accomplish it. I want my hives unpainted in the spring and fall, and I want them white in the hottest weather, because the white paint will protect the hives from the excessive heat. How can I have black when I want it?

Pres. Beers—Paint them twice a year.

Dr. Miller—Of course it would be too much expense and trouble painting twice a year; you can accomplish that by shade boards to a large extent. I very much doubt if you would care for them in the fall, or in the spring; in the spring you want the benefit of the heat, and to let the sun shine directly upon the hives. Suppose you have a single-hive, you get the heat and are all right in the spring; that part is easily managed, but now comes the summer, and you want to have them protected from the sun. If you live out in the country where you can get long slough-grass, put a good armful on the hive, and put a stick of fire wood on that. I don't know of a better covering, and it is a good non-absorbent; it gives shade and protects from the heat of the sun. You can put some kind of a board covering on, a temporary rough one, but I believe I would a little rather have long-grass covering.

The convention then adjourned to meet the first Thursday in March, 1899.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Increasing and Italianizing Colonies.

1. My bees are hybrids and I want to Italianize them this year; this is my plan of doing it—will it work all right?

I want to send for a tested Italian queen early in the spring and introduce her to one of my hybrid colonies, and as I am going to increase by dividing this year, I thought, by swarming-time, I would close all the hive-entrances of the hybrid colonies with drone-excluders, so that the young queens from the nuclei would be mated with one of the drones from the hive having the tested Italian queen. Then to Italianize those colonies from which I built up the nuclei (for the queens of those colonies will still be hybrids), I thought I would take the queen from one of them, and also take away the brood and eggs from that colony, and exchange it with the one having the tested Italian queen, and so let the colony from which I took the hybrid queen rear queen-cells from the Italian queen's brood and eggs. Then, after they have reared a number of Italian queen-cells, I want to give each of the old colonies having the hybrid queens an Italian queen-cell.

2. How early must I give the colony from which I want to rear Italian drones, the Italian queen? I mean the colony in which I want to put the Italian queen that I send for? Will it

be time enough if I introduce her say about the beginning of April? And will this tested queen have time enough from the beginning of April to rear drones for use by swarming-time?

IOWA.

ANSWERS.—1. You will find some difficulties, probably. Shutting in drones will make little difference if others have dark bees within a mile or less. If you succeed in having your queens mate as you desire, it will be close in-breeding, which is not considered very good. Something depends on the number of colonies to be treated. If the number is small, it may work very well. If the number is large, be prepared to meet some disappointments, and to secure a smaller crop of honey this year.

2. Very likely it will be as well not to introduce your Italian queen before April or even later. She can have plenty of drones a month later than the time she is introduced, providing the weather is warm and honey yielding. If you have two Italian queens not related, rearing queens from one and drones from the other, your success will be better, but as before said, if neighboring beekeepers have hybrids your chances for purity are lessened.

A Question on Management.

I have 30 colonies of bees in two-story eight-frame dovetail hives. They were united last fall and wintered on the summer stands without any loss so far. I intend to run them for comb honey. I want to take away the under story and let them swarm naturally, then hive them in it on the old stand, depending upon the swarm for surplus; then unite in the fall.

1. What do you think of the plan?
2. What percent of the lower stories do you think I will get?
3. When must I take them?

WIS.

ANSWERS.—1. It may work quite satisfactorily.
2. I really don't understand what you mean. If you mean what percent of the lower stories you will have swarms to put into, that's a thing no one can tell anything about. If the season is poor enough you might have no swarms. If that isn't the right drift for your question, please ask more fully.

3. You might take them away just before, or at the beginning of, your honey harvest. In some cases there will be brood in lower stories, which can be given to other colonies which haven't brood in as many as eight frames.

Getting Bees Out of a House.

A neighbor wants me to take out several colonies of bees that have taken up their abode between the studding of his house, entering thro a crack on top the veranda. The house is nearly new and well painted. One colony stored a lot of honey in another house here, that melted one hot day, spoiling the plaster. How can I get them out without spoiling the house?

NEBRASKA.

ANSWER.—Find out about where the swarm is located by listening carefully with your ear against the wall. Make a hole in the wall in addition to the hole that the bees have been using so that one hole shall be above the other. If one hole is already near the bottom of the space occupied by the bees, make the other hole as near as possible to the top of the space, and vice versa. Put some rags very strongly saturated with carbolic acid in a smoker and blow into one of the holes till the bees run out of the other. Of course you can't get out any of the combs without cutting the wall. If the only object is to be rid of the bees without caring to save them, there may be no need to make a second hole. Just squirt a lot of carbolic acid into the hole that is there.

Closed-End vs. Loose-Hanging Frames.

In your answer to a question on page 150, in regard to closed-end frames vs. open-end frames, you say "the advantage is more than counterbalanced by the inconvenience in handling, unless I am mistaken," which it seems to me you are. I have handled bees in frame hives in a small way for a good many years, procured my first swarm in 1856, and the larger part of the time in hanging frames, but for the past 10 years I think I have had all, or nearly all, closed-end frames, and I think them very much easier to handle than the hanging frames; that they are warmer, and that bees breed up faster in them in the spring than hanging frames no one will doubt, I think, who has ever tried them.

My hives are 8 frames, but if I were to start in now I would make them 10 frame. My section of the country (southern New Hampshire) is quite 1,200 to 1,400 feet above sea-level, and we need a warm hive. My bees are wintered on the summer stands. Some years we get a fair quality of honey, and a fair amount, but in others hardly enough for the bees themselves, tho I think almost every season there is honey enough, but the weather is wrong just at the time when the bees would get a good supply if conditions were favorable.

When you try closed-end frames until you are accustomed to them I think you would hardly like to go back to hanging frames, tho perhaps propolis troubles more with you than here, but we have plenty of it.

N. H.

ANSWER.—All do not think alike about things in general, nor about hives in particular. It may be on account of the hives

themselves, and it may be on account of something else. All do not have the same management, and so what suits one may not suit another. As closed-end frames have been in use nearly as long as hanging frames, they are by no means new things, and it seems pretty clear that the majority prefer the hanging frames, considering the large number in use. It is possible that if I tried the two kinds that we have had, I might prefer the closed-end frames. I hardly think I would prefer any closed-end frame to the hanging frames I now use. I certainly know that I prefer the ones I am using to either of the kinds of closed-end frames I used, and they were among what are considered the best, and I think I gave them a fair trial. But they were so unsatisfactory that they are now untenanted. But I am quite willing to concede that others may have a different preference.

Albino Bees.

Are the albino bees equal to the Italians, as honey-gatherers? Are they any gentler?

SUBSCRIBER.

ANSWER.—As a rule, I believe that albino people, or albino animals, are supposed to be somewhat lacking in vigor, but it is possible that some albino bees may be just as vigorous as regular Italians. I think albino bees have a good reputation for gentleness.

Thin Foundation for Brood-Frames, Etc.

1. Will thin foundation do for brood-frames? If not, why?
2. Can I extract frames not wired or fastened at the bottom, and partly to the sides? I have no extractor, but will get one if those combs can be extracted. They are the large Langstroth or brood-frames.

KANSAS.

ANSWERS.—1. The chief objection to thin foundation for brood-frames is the sagging. If sufficiently supported by wires or splints, it may do very well.

2. By being careful enough, you may extract if the combs are fastened only at the top.

Comb or Extracted Honey?—Fastening Bee-Veil.

1. Which crop would you rely on one year with another if you could get 12½ cents per pound for comb honey or six cents for extracted?
2. Would you advise always using a queen-excluding honey-board when working for extracted honey?
3. Which is best, wood-slatted or plain zinc?
4. My mother cannot think of any way to keep her bee-veil fastened down at the bottom, so as to keep out the bees. Can you give any hints that will help her?
5. Which crop has the least labor connected with it, comb or extracted?

ANSWERS.—1. Comb. But in some places the other would be the best.

2. Yes, as a rule.
3. Wood-zinc. Yet it is possible you might like the plain zinc. Some excellent bee-keepers do.
4. Have a hem at the bottom through which is run a rubber cord. With a safety-pin fasten it down to the waist in front. If well stretched down when pinned, not a bee can get under.

5. Probably in most cases extracted. That is, it is less labor to run the same number of colonies for extracted than for comb. Yet it is possible they might be run in a slipshod way for comb honey with less labor than for extracted. But it would be slipshod comb honey and would command slipshod prices.

Getting Bees Into Standard Hives.

I have often intended writing you before, but if I waited a week or so some one else in the same quandry would present his case to you, and save me (and you) the trouble.

Don't tell me to get a bee-book; I got them before I had ever seen a hive of bees, except in a picture. Now I suppose you wonder what I can have to ask you, if I have any intelligence whatever. But I do not know nearly as much after having bees two summers as I imagined I did after reading a lot of bee literature the winter of 1896-97. I bought a choice colony from a New York bee-keeper, another here, and transferred them both to Langstroth hives. It took hours—from one p.m. until after six for each one. But I did it, despite advice to get "Ole Mose Livingston," who could transfer, put in "cross-sticks," and make the bees stay, for a dollar a colony.

The first summer I was trying all sorts of experiments, dividing, rearing queens, etc. Last year I had 12 colonies, or perhaps nuclei I would better call them. Only one survived the cold snap, our below zero weather, and all my hopes are centered on that colony and one I bought but have not moved home yet. It is in a tall hive, frames 11 inches wide, and 13 inches deep, inside measure, and slanting bottom nailed on, and the four sides project three inches above the frames. What hive is it?

The colony I have here had a hybrid queen batch July 30. They were cross, and so got a chance to build up, as I did not med-

dle with them much. Besides, they were in a Heddon hive, and the Langstroth frames were easier to handle.

I have empty, two more Heddon hives, 16 frames of good combs to each; seven Langstroth hives, combs for three of them; and another of those high hives. I want to get the bees into a Langstroth hive from the tall hive, so as to get surplus in marketable shape, but leave the combs in that hive so as to have an Italianized colony in there later and sell it to some one who does not care for "new-fangled hives." The Heddon hives will go, too, for I am not an expert to handle hives. I examine each frame, and they are too much trouble—16 closed-end frames to a hive. The surplus will be all right, over those hives, but there are only holes cut in the top edge of each frame in the other, any small box is set on top, so I want the bees out. Could I drum them all out into two of those nucleus boxes Doolittle uses, give a good queen to the queenless half, and put them back to care for brood and build up to sell, and put the others in a Langstroth hive on as many combs as they can cover with the queen, Italianize later, feeding them of course? I have some division-board feeders made according to Doolittle's "Queen-Rearing." I think it a good plan, but hope you can suggest something better if it is not. I have the nucleus boxes with wire sides, and was successful with them, but have lost confidence in my own plans.

JOHNSTOWN, PA.

ANSWER.—Your letter interested me even before I opened the envelop, for the postmark of that ill-fated city in Pennsylvania where the flood swept so many away brought to mind the many happy days I spent in that city in the long ago. Then it's quite refreshing to find some one who has taken pains to keep her reading up to, and ahead of, her practice. It is a mistake to suppose that this department is mainly for those who have not read up in any text-book; indeed, many a question is asked by those who have had no little experience, and the advice can hardly be repeated too often that to make a success at bee-keeping one should be well read up in one or more of the text-books. Even after that there will be always plenty of room for questions.

Now between you and me, don't you think you ought to be just a little bit ashamed of yourself to let other people ask all your questions for you? What if all should do that way? But it's no time to scold now, after you've commenced asking for yourself.

I don't know the name of your tall hive.

Considering that you want to get an improved queen into the old hive at the time of making the change, your plan of dividing may do very well. But don't operate till the colony is strong, perhaps just before clover bloom. You say nothing about where you will set the two parts, and upon that much depends. If you leave the old hive on the old stand, the other will not do very well unless you give it nearly all of the driven bees. Remove the old hive to a new stand, putting the new hive on the old stand, and all the bees you put in the old hive will stay there, and for a day or two there will be an additional force coming from the old hive, for all the field-bees of the old hive will enter the new one on their return from foraging. The large number of young bees hatching out will make up the loss in good time, and the old colony will be strong enough.

Bee-Keeping in Washington—Foul Brood.

1. What part of the State of Washington is the best for bees and honey? Is any of it good? I would like to know about the east part, also on the coast.

2. What was the final decision of Messrs. McEvoy, R. L. Taylor, and others, about transferring to get rid of foul brood? Is one transferring enough, or should they be transferred twice, the last four days after the first? Should they be starved during the four days?

IOWA BOY.

ANSWERS.—1. I am unable to give the desired information.

2. Nearly all agree that the bees must be thrown on empty frames of foundation the second time. The bees are not to be fed during the three or four days, the object being to get them to use up all the infected honey before there will be any larvae to feed.

Localities for Bee-Keeping, Etc.

1. Is Virginia a good State for bee-keeping?

2. Are the Southern States better for bee-keeping than the Western?

3. Which hives are the best?

4. Do queens live as long as worker-bees?

PENN.

ANSWERS.—1. Some good locations in Virginia, some not so good, but I don't know where the best are.

2. Taken as a whole, probably there isn't much difference.

3. All are not agreed on any one hive. Perhaps at present the dovetailed is the most popular.

4. Queens live from a few months to four or five years. Workers in the busy season live about six weeks. Those hatch in the fall live until some time the next spring.

Running for Extracted Honey—Preventing Swarming.

1. I want to run a few colonies of bees for extracted honey in 8-frame dovetailed hives, and prevent swarming as much as possible. The plan recommended by some is to put one or two frames of brood with the queen in the first story, filling out with full

frames of foundation, and putting the remaining brood and bees in a second story with an excluder between. What is there to prevent the bees starting the cells above, and thus cause swarming?

2. Why won't the cells have to be cut out to make it a success? I have never seen it recommended.

3. Would it not be just as well to use no excluder but alternate the brood and combs with full sheets of foundation in both stories just before the swarming season? I have no empty combs. Which plan do you think best, and can you suggest a better one?

4. What do you think of producing extracted honey without using excluders? Are not a good many doing that now?

CONN.

ANSWERS.—1. The great amount of empty room in the story that contains the queen is enough to prevent the desire to swarm.

2. There is no mention of cutting out cells, because none are expected.

3. Your plan is not so sure to prevent swarming, and the frames of foundation will not be so well built out. A frame of foundation between two full combs is often made thin, while the cells of the old combs are unduly lengthened. The other plan has been tried and approved.

4. Probably no one who has tried the two ways thinks it better to use no excluder. With the excluder you never need put brood in the extractor. Read the article by C. Davenport, on page 179. A good many put brood in the extractor, and a good many have thus a poorer quality of honey.

Combs Left with Honey in Them.

What had I best do with some combs of honey that I have? I left 20 colonies of bees on the summer stands last fall, after packing the upper stories with forest leaves; but after the extreme cold weather that we had for 20 days (the thermometer hardly ever registering above zero, and at one time 48 degrees below zero) there was not a live bee in the whole 20 colonies. Now, after the weather gets warm enough for bees to fly freely, would it do to let my other bees—some 51 colonies—carry out the honey from the first-mentioned hives, and save the combs, and after cleaning hives and combs, use them for putting swarms on, the coming season?

How would it do to clean up the hives and combs as well as I can, and put swarms right on the combs with honey in them, putting sections on swarms right away, or soon after putting the swarms into the hives?

WISCONSIN.

ANSWER.—Either plan you mention will work all right. Only, if you allow the bees to rob out the honey, be sure not to move any of the hives they are robbing until several days after all the honey is cleaned out. There is danger that worms may trouble the combs before swarming-time, so perhaps the best thing is to put each empty hive under one of your good colonies till swarming-time. That will make them safe from worms, and it will also insure their being cleaned up well.

Brood-Chamber Crowded with Honey.

I have just bought 3 colonies in 8-frame Langstroth hives. They seem to contain a good deal of honey, and I should think that by and by there will not be enough room for brood. They weigh about 50 pounds each. I am a beginner, and have no extractor as yet. Would it do, when the combs now empty are getting full of brood, to take the two outside combs of honey and put them in the middle, and put on a super? Would the bees take the honey up and store it in the sections? We are earlier here than you are; I had a swarm out on May 12, last year.

B. C.

ANSWER.—You will probably find that the bees will use up more of that honey in brood-rearing than you suppose. You will hardly find it satisfactory to try to get the honey carried into sections. It's a good thing to have some combs of sealed honey on hand in case of need.

Keeping Bees in a Garret.

I wish to ask you in regard to putting a colony of bees in the garret of a house. I want to put them in the north end so they will face the north. Will that do, or would it be better to face the south? Give directions how to build such a hive. A neighbor wanted me to construct it for him in his house. The house is heated with hot air, and can be regulated.

ILLINOIS.

ANSWER.—It is generally considered that bees will do better facing south than north. A hive for a garret may be built the same as a hive for out-doors, the special point of difference being that particular pains must be taken to have a passage-way from the entrance of the hive to the outside by means of a passage-way that shall allow no bee to get out into the garret.

Brood-Combs with Candied Honey.

What can I do with candied honey in the brood-frames? Will the bees remove it, or shall I destroy the combs?

KANSAS.

ANSWER.—I think I would try the plan of M. M. Baldrige. Spray the combs with warm water and give to the bees, repeating the spraying as often as necessary.

GEORGE W. YORK, Editor.



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Place and Date of Next Meeting:

Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

THE DREAMER.

Let the dreamer lie at ease
And gaze at the bright blue sky,
Lulled by the murmuring bees,
While the summer winds go by.
Tho its skies be cold and gray,
Be this thy heart's content—
That thine is the sweeter day
In useful labor spent.—Farm Journal.

Honey Leaflets as Honey-Sellers.—Editor Root, of Gleanings, finds a number of his readers report that honey leaflets are not a success as honey-sellers. He thinks the trouble is that they are gotten up in too cheap a form; that something more expensively and attractively gotten up might do better, and asks for opinions.

We think the trouble has been that nearly all the leaflets put out so far have been too large—there is too much to read. Busy people haven't time to wade thru so much. Perhaps a single leaf printed on both sides in clear type like this would be better. Say a leaf of paper about 5x8 inches. It might have two or three small pictures on it.

But, after all, much depends upon the honey itself. If it is of as good quality as it ought to be, and prospective customers get a good taste of it, they will buy if they really want any honey, and if the price is right.

Many people do not care for honey—wouldn't eat it if it were on the table every meal. But there are enough people

who do like honey to use every pound that can be produced, if only it could be brought to their attention. How to do that thing is one of the great questions yet to be satisfactorily solved. If any of our readers know *how*, and wish to help, our columns are open.

LATER.—In Gleanings for April 1, we find the following in reference to the use of honey leaflets, from Mr. Dan White, who seems to know *how* to use them:

Now, then, Mr. Editor, you want our views. Should the leaflet be more expensive? I might suggest one verse or a few lines added for the *express* purpose of cutting out and pasting in our hats. I should want it to read something like this:

"Don't waste these leaflets, throwing them on porches, and scattering them around promiscuously.

"Don't use these leaflets if your honey is not of good quality and *thoroly* ripened before it was extracted.

"Don't forget, when you do make a sale of *good* honey, to hand the customers a leaflet.

"Don't forget to tell them that it will teach them how to warm up candied honey; it will educate them quite a little.

"Don't forget that very *few* are educated about honey and bees.

"Don't forget that half the people hardly know what honey is. They should and will if we do our part well. Those leaflets will help do the talking.

"Don't forget to leave a sample of honey when you call from house to house.

"Don't forget to leave the leaflet and your name and address, because, after they eat the *good* honey they will read the leaflet and then say, I *must* get some of that honey."

Don't you see we almost compel them to read those leaflets, and also buy our honey? Don't forget to stay at home, tho, if your honey happens to be a little off—so much so that your own family don't like it. Don't forget that poor honey sells poorly, just the same as any other poor thing. Don't forget those leaflets are all right if you know how to use them rightly. Don't forget to take off your hat every few days and read these *don't's*. Don't forget that, if the leaflets are all right in one place, they *must* be so in other places.

Order Bee-Supplies Early is the usual annual advice to bee-keepers at this season of the year. Experienced honey-producers hardly need be so reminded, but the beginners, or those of limited experience, perhaps should be advised to have on hand, in ample time for use, all supplies that will likely be required during the honey season. Be prepared for whatever comes, whether it be a large crop or a failure.

Howell's Scripture Honey-Cake.—The whites of eight eggs well beaten, Job. 6, 6; one-half cup of butter, Gen. 18, 8; one cup of honey, Gen. 43, 11; one-half cup of sweet milk, Gen. 18, 8; flour to make a stiff batter, Leviticus 2, 2; spices and almonds to suit taste, Gen. 43, 11, and a little leaven, 1 Cor. 5, 6. Bake it to-day, Exodus, 16, 23.

Great Britain's Honey Imports during 1898 amounted to about \$120,000. So reports the British Bee Journal.

Smart Bees in Texas.—The Evanston (Ill.) Index contained an item in regard to some "smart bees" in Texas. Mrs. N. L. Stow, vice-president of the Chicago Bee-Keepers' Association, saw the item and kindly handed it to us. It reads as follows:

"The busy bee has long had a reputation for industry, but I always considered it rather conservative until I ran across the up-to-date variety that does business in the Fort Davis region of west Texas." So spoke a former journalist, now a railroad man. "They have some of the finest honey in the world out there, and its delicate flavor is due to the blossom of a shrub that grows profusely on the mountain sides. The trouble is, however, that the flowering season

of the bush is brief, at a given altitude, and the bees have to follow their favorite food higher and higher as the season advances. Now, you know the bee makes a 'bee-line' for the hive as soon as she has soaked her feet in the liquid sugar of the flower.

"Well, the west Texas bee evidently found it very inconvenient to climb all the way down to the valley with each load of honey, and some smart bee struck upon a plan as simple as it was unique. It is generally known that the self-same shrub that gives honey to the bees produces a succulent root, upon which as big and rocky-looking a lizard as you ever saw feeds and fattens. This creature, called a 'yollo' by the Indians, is 14 inches long, and is too lazy to get out of its own way. The yollo's back bristles with points, and he is terrible to behold, yet to the bee he is only a God-send, and without the least fear a swarm will proceed to establish its comb between the points of the yollo's pachydermatous back, and without ado fill in the honey. The beast, of course, following the food-plant, will keep the hive always within easy walking distance, and in the fall, when the season is over, the bees swarm back into the lower level, while their diminutive pack-mules wind down the mountain paths to the valley, where the honey is quickly transferred to its winter quarters in the bees' trees or the ranchman's hive."

Perhaps some of our readers in the locality referred to can tell us something further about this. More than likely it is "only a bee-story."

The Philadelphia Bee-Keepers' Association is thus spoken of by the Philadelphia Public Ledger:

There are many associations of bee-keepers in America and Canada, but of them all that of the Philadelphia bee-keepers is the oldest, and in its day has been the most prominent and influential. Its origin and continuance, and the good work done in and thru it, have all been due to the efforts of the president, Dr. Harry Townsend and his good wife, both of whom are devoted friends of the honey-bee, and thru all the years have had faith that some day its economic importance would be recognized, and farmers, villagers, and even city people, would come to understand that with its aid a luxury could be added to the table, and dimes to the pocketbook, and from the otherwise wasted sweets in the flowers of field, forest and garden.

As the United States Bee-Keepers' Association will hold its next annual meeting in Philadelphia, its members will have the privilege of meeting the members of the Philadelphia association. We wonder if it really is older than the National society.

Tin Cans vs. Barrels for Honey.—We hope that tin cans will be considered more favorably this year by those who have been using barrels heretofore for holding extracted honey. Cans may be a trifle more expensive, but they are ever so much more convenient for handling, and for reliequifying the honey. Then they seldom "spring a leak" as do the barrels. Neither do cans soak up a lot of honey, and thus cause waste and loss to the shipper or buyer. There are so many evident advantages possessed by cans over barrels that all need not be enumerated here. We trust that the leaky, bulky, cumbersome honey-barrel may soon be a thing of the past.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for \$1.00; 250 for \$2.25; 500 for \$4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premium offered on page 236 is well worth working for. Look at it.



HON. EUGENE SECOR, of Winnebago Co., Iowa, wrote us April 5:

"Two days of spring. Bees are still in the dark. Considerable loss is reported."

MR. WM. FRICKER, of Hampshire Co., Mass., when sending a new subscriber for the Bee Journal, March 23, wrote:

"I have taken the American Bee Journal over a year, and I am more than satisfied. No bee-keeper should be without it."

THE FARM JOURNAL is the boiled-down, hit-the-nail-on-the-head paper, cut to fit the wide-awake farmer and villager. We give the Farm Journal for the balance of 1899 and all of 1900, 1901, 1902 and 1903, nearly five years, as a premium to every one of our subscribers who will accept the offer on page 222.

MR. G. M. DOOLITTLE, of Onondaga Co., N. Y., wrote us April 3:

"Snow and cold here with no let up for spring yet. Bees out-doors are in bad shape, with many dead, as they have had no good chance for a flight since last November, or nearly 4½ months."

DR. C. C. MILLER is not only a prominent bee-keeper, and a leading writer on bees, but he is also a well-known worker in the Presbyterian church. He bears the distinction of being the only layman in the State of Illinois who is chairman of any of the many committees of the synod which comprises the Presbyterian churches of the State. Sometimes we are inclined to think that it is the Methodist blood in him that helps to make him a good Presbyterian. You know it is said that "blood tells."

MR. O. O. POPPLETON, of Dade Co., Fla., wrote us March 28:

"My honey season is just coming on. As I wrote you a short time ago, our bees are not in their usual strong condition for the time of year, and altho the saw palmetto promises an unusually large flow of honey, the lack of strong colonies will prevent my getting a full crop. Other bee-keepers up and down the coast, whose fields were not so badly fire-swept as mine were last spring, tell me their bees are in their usual condition."

MR. C. A. HATCH, of Richland Co., Wis., vice-president of the United States Bee-Keepers' Association, wrote us April 6:

"FRIEND YORK:—According to present indications there is to be no very serious loss of bees in our part of Wisconsin. I have talked with four or five bee-keepers representing an ownership of over 600 colonies, and only one reports serious loss, and this lot were wintered out-of-doors protected by straw packing only. Of course, bees are in the cellar yet, and putting-out time may change things somewhat, but I think not much."

"It is too early to say much about the honey prospect, but I can say this much, white clover does not appear to be injured. I hope for a good honey season, and a prosperous year."

THE FEARFUL TRAVELER.—Dr. Peiro has traveled a good deal, and makes the following observations:

"It is almost pathetic to note, in traveling, the fear some display at their surroundings. Not from danger of accidents, but dread of the evils that may befall them from contact with their fellow travelers."

"From childhood they have been admonished regarding the subtlety of strangers that the unfortunate credulous are at once on guard, and the defensive, lest every hand but their own be raised against them. The anxiety they display on this score is manifested by the ludicrous efforts

they make for the safe keeping of their treasures. They not only frequently glance in the direction of their stored valuables, but inadvertently clasp their hands over them for greater assurance, thus revealing their secret to such as might annoy them. This constant fear greatly mars the pleasures of traveling. The only class likely to come to grief is the ignorant and vainglorious, anxious to display their 'Smart Aleck'-ism to all who seem to cater to their conceit. These fools—they are generally from 18 to 24—deserve the punishment they so glaringly invite.

"The better way is to modestly attend to one's legitimate business, and conclude that our fellow travelers are as reasonable, civil and as honest as ourselves. This principle will secure for us due respect and avoid disappointments.

"DR. PEIRO."



To Secure the Whitest Sections. Mr. Shaver, of Canada, allows no sections to be sealed over old brood-combs. Colonies with old combs are allowed to build combs in sections and fill them, but, as the capping process is begun, the super is transferred to a colony of the current year.—Bee-Keepers' Review.

Keeping Bees Good-Natured is considered by T. F. Bingham, in the Bee-Keepers' Review, and the moral of his discourse is that if we would get along in towns without having complaints from neighbors as to cross bees, we should keep a cloud of smoke in the apiary when working with them. A good bit in that. It is also quite possible that Mr. Bingham had in mind that if more care were taken in this respect there would be more Bingham smokers in use, and there was nothing wicked in the thought if he did think so.

The Secret of Successful Honey-Production, according to Messrs. Aikin and Doolittle, in the Progressive Bee-Keeper, lies in so manipulating colonies as to have the maximum number of bees on hand ready for the harvest, and those bees without any desire to swarm. To prevent swarming, Doolittle says cage the queen for 10 days just before harvest, then cut out all queen-cells, cage the queen, or one just commencing to lay in her place, in a cage with a stopper of candy that will take the bees about two days to eat thru, and swarming is done for six weeks, and for the whole season unless the honey-flow is long drawn out.

Latest Development in Weed Foundation.—A series of illustrations in Gleanings show thicknesses of walls and bases in natural comb and in different kinds of foundation, running from five to 13 feet to the pound. It seems to be a question that has not been fully settled in the minds of all whether it is better to have extra wax in the base or in the incipient side-walls, or whether the bees would thin either or both. The latest effort of Mr. Weed is to produce foundation with a very thin base, with a side-wall not very deep

but containing considerable wax. The experiments of Hon. R. L. Taylor showed a thinner base in Given foundation than in others, notwithstanding the fact that rolls would make a more regular and a nicer-looking article. Editor Root says that "experiments show that we can stick as much wax as we like in the walls, for it will be thinned down; but we must be careful about getting too much in the bases; for while the bees may thin it there, they rarely do; and the excess of wax, therefore, in the bases is simply so much waste product, and who pays for it? The bee-keeper, and not the supply-dealer." At present the new product is made with plates, in sheets large enough to fill a section, the thickness being about 1/4-inch.

Spraying Fruit-Trees.—J. W. Rouse says that spraying trees when in bloom shows ignorance on the part of the sprayers. The time to spray depends on the object of the spraying. For fungus, before bloom. For codling-moth, after the bloom has fallen, as the moth does not deposit her eggs until the fruit is set. For information as to spraying, send to Cornell University, Ithaca, N. Y., for Bulletin No. 101 (The Spraying of Trees), also Bulletin No. 86 (Spraying of Orchards), both being sent free, as also Farmers' Bulletin No. 7, sent out by U. S. Department of Agriculture, Washington, D. C. The best of all is the Spray Calendar, issued in 1895 by Cornell University Agricultural Station. —Gleanings.

Bee-Keeping No Sinecure in Cuba.—A. W. Osburn's son warns adventurers not to be too rash in rushing into a strange country to make a fortune. Money, big money, can be made at bee-keeping in Cuba, but it takes work, big work. To produce a crop of honey requires 365 days' work in the year. "The tropical sun shines and the flowers bloom the year round." Beginning with March, for an apiary of 500 or 600 colonies, 125 or 150 queens must be reared, got to laying, and colonies must be built up. By May swarming is in full blast, no time for a nap between swarms, and for four months the wax-worm furnishes much employment. Then when the harvest begins to come in, when the 500 or 600 colonies get limbered up and bring in 2,500 or 3,000 pounds in a day, "you have to step around as if you had coals of fire in your shoe." The thought of taking in \$125 a day occasionally, is hinted at as no slight offset.—Gleanings.

Boiling Foul-Broody Honey.—J. H. Martin comes in as a pacificator in Gleanings, with the belief that those who hold such diverse views as to the time of boiling necessary to kill foul-brood spores may all be right. He thinks the boiling acts in strata, the lower stratum boiling first, and so on to the top. A small amount will be boiling thruout in a short time, but not so a larger quantity. He advises, "boil a gallon in a large boiler 10 minutes, 20 gallons an hour, 50 gallons three hours." Prof. Hodge, in the same journal, calls attention to the much greater difficulty of destroying the vitality of spores, advising at least 15 minutes boiling with thoro stirring on three successive days. The expectation is that by the time of the third boiling all the spores may have vegetated, and as bacilli 15 minutes will be enough to kill them. T. W. Cowan says: "The spores also possess the power of enduring adverse influences of various kinds without injury to their vitality, so far as germinating is concerned, even if subjected to influences fatal to bacilli themselves. The latter are destroyed at the temperature of boiling water, while the spore apparently suffers no damage at that temperature."

SWEET CLOVER

And Several Other Clover Seeds.

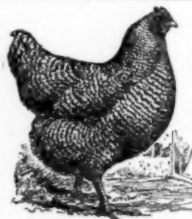
We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot).....	60c	\$1.00	\$2.25	\$4.00
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than it does common stock, and it pays tenfold better. Send stamp at once for Illustrated Catalog and Poultry-Book.

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TWO WAGONS AT ONE PRICE.

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Root's Column

No=Gob Foundation.

We Have it at Last.

It has been proven that wax in the base of ordinary foundation is not utilized by the bees, but is left there practically as it leaves the mill; and the result is, when drawn out into comb, the so-called gob, or fishbone, in comb honey.

Our New Thin-Base FOUNDATION

is exactly what its name indicates—foundation with a base as thin as natural comb, with heavy deep walls.



Fig. 7, herewith shown in cross-section from an actual photo, represents the new thin-base heavy-walled foundation running about 10 feet to the pound.



Fig. 13 represents the ordinary thin foundation with heavy base and scarcely any wall, about 10 feet; the heavy base, without modification, going right into the comb honey with very little change, and forming fishbone.

We have so far only small dies, and cannot afford to sell this product for less than \$1.00 a pound. Next year, perhaps, we shall have larger dies, and will make a corresponding reduction in price.

Seven or eight pieces, large enough to fill 4 1/4 sections, 15 cents, postpaid; 24 pieces, prepaid, 40 cents.

The A. I. Root Company
MEDINA, OHIO.

GENERAL ITEMS

Bees Came Thru All Right.

The bees have come thru so far all right, but it looks blue for them this morning—April 3—with the ground all covered with snow. I hope this will be a favorable season for them. They are all (some 80 colonies) in the home yard in town. I am not able to go to the country to have an apiary, as I will be 72 years old May 12. I never employ any help, but do all the necessary work myself. Success to the Bee Journal.

D. C. McLEOD.

Christian Co., Ill., April 3.

Organizing in Utah.

We have formed a bee-keepers' organization here within the last month, known as the Uinta Bee-Keepers' Association, starting in with about 25 members. We hope to start other associations, and work in harmony in every respect. We have sent a petition to our congressman in regard to the pure food law. I am pleased with the Bee Journal.

* I have not lost one colony out of 96. All are doing well, and have plenty of brood and young bees.

G. W. VANGUNDY.

Uinta Co., Utah, March 12.

Poor Season Last Year.

The bees last year did very poorly. I got only about 1,000 pounds of comb honey from 150 colonies. So far they have wintered fairly well.

JNO. SCHUMACHER.

Platte Co., Mo., March 17.

Bees Wintered Nicely.

My bees wintered nicely on the summer stands. I did not lose any. They gathered considerable honey from the plum and peach bloom, but everything is too dry for any more until it rains. Crops look bad—wheat and oats drying up. Our corn was bitten down by frost March 28, but is coming out again.

D. F. MARRS.

McLennan Co., Tex., April 3.

Backward Spring.

The spring is very backward. Snow has fallen to the depth of over eight inches the last three days. There is heavy loss of bees thruout this section.

E. T. FLANAGAN.

St. Clair Co., Ill., March 29.

Over Half the Bees Dead.

Over 50 percent of my bees will be winter-killed, and the balance in very bad condition, owing to the severe winter. They were on the summer stands.

C. BECKER.

Pleasant Plains, Ill., March 28.

Bees Not Wintering Well.

Bees are not wintering well. Those in the cellar are spotting hives badly. It has been such bad weather that they could not be taken out yet. The ground was covered with snow last night.

GEO. L. FERRIS.

Cayuga Co., N. Y., March 31.

"Adel" Bees are "Superior."

EDITOR YCRK:—Kindly permit me to correct one statement Dr. Miller made when he replied to the question, "What are Adel bees?" If my memory serves me correctly, he made this reply: "Any strain of Italian bees can be called Adel," or something very much like this.

The bees that I call Adels (properly pronounced Ad'l) were bred up in my apiary from the gray Carniolans, which came

Rudyard Kipling's Life

Was saved by the inhalation of Oxygen, the only Specific cure for all forms of living diseases. Office of The Oxygen Company, 34 Central Music Hall, Chicago—to whom all letters of inquiry should be directed.

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100, 6 to 8 in. \$1; 12 to 18 in. \$2.50.
100, 2 ft. \$10 prepaid. 100, 4 to 6 ft. varieties, \$15. 50 choice Fruit trees, 29 varieties, \$10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots **SENT FREE.** Good Local Agents Wanted.
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PAGE
LAST WEEK
we told you there was something in the coil of The Page. As the mercury rises watch the fence and see about it. Does it sag?
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
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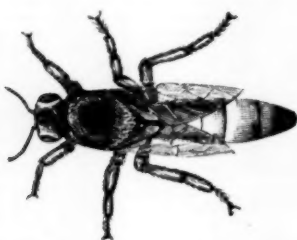
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Every Bee-Keeper should have

SCIENTIFIC QUEEN-REARING.

YOU CERTAINLY will have it if you desire to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may safely introduce any queen at any time of the year when bees can fly; all about the different races of bees; all about shipping



queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know. The price of the book is \$1.00, being bound in cloth, gold-lettered.

We want 1,000 New Subscribers

Between Now and June 1,

And we would like to have our regular subscribers help us in this work. In order that all who may want a copy of Doolittle's "SCIENTIFIC QUEEN-REARING" may earn it very easily, and at the same time aid in swelling the Bee Journal's list of subscribers, we wish to make the following **Liberal Offers**—only to our present subscribers:

Offer No. 1. We mail the book for \$1.00, or club it with the Bee Journal for one year—both for \$1.70.

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Now, the sooner the new names are sent in the more copies of the Bee Journal they will get for their 60 cents, and if sent before April 1, each will be certain of getting the Bee Journal for **nine months**, or about 40 copies.

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direct from Carniola. Frank Benton, who spent many years in Carniola, says he never saw an apiary of all steel-gray bees in that country. In all apiaries there are more or less yellow-banded bees. The native bee-keepers consider the yellow-banded superior to the gray bees, and call them "Adels." Adel signifies superior.

Bees are wintering well, tho March has been the worst month of the year; no warm weather, but plenty of small snow-storms. HENRY ALLEY.

Essex Co., Mass.

[If Adel simply means "superior," then of course Dr. Miller was right if he said that "any strain of Italians can be called Adel," provided they are excellent bees. No one has the sole right to the words "Adel" or "superior," any more than to the words "simplicity" or "perfection," as we understand it.

Several of our readers, during the past few years, have enquired as to the meaning of "Adel bees." It seems to us if we were to designate any particular variety of bees, we would call them by some name that would be self-explanatory—some word that could be found in any common dictionary. —EDITOR.]

Wintered Well in a Bee-Cellar.

I have 112 colonies in a bee-cellar 15x33 feet. They are wintering nicely. Last season I got one-fourth crop of honey. I hope this year they will do better. Success to the American Bee Journal.

E. R. WRIGHT.

Scott Co., Iowa, April 4.

Wintered All Right.

My bees came thru the winter all right, tho a little short of stores, but with plenty of bees.

I find lots of hints in the "Old Reliable" that come in handy. I wish you success.

J. BRIMMAGE.

British Columbia, March 24.

An Old Bee-Keeper's Experience.

I have been reading the "Old Reliable" for two years, and I could hardly keep bees without it now. I have kept bees 25 years, but am a farmer, and, until late years, I was at the head of a dairy and stock farm, but as age came on I had to turn the care of the farm into younger hands, which is run under the name of F. Hall & Son. But I cling to the bees and the garden. I never wintered more than 21 colonies. I used to keep them in box-hives and wintered them buried in the ground, sometimes fairly well and other times not so well. But the soft winter of 1877-78 cleaned out my bees. The last 15 or 20 years I have just put them into the cellar, which I will describe.

All of it has a well-mortared wall, and the exposed sides have a double wall, all cemented on the bottom. The bee-cellar is 8x14 feet, partitioned off by a single brick wall. A window on one side has a wire screen on the outside and a hanging glass window on the inside. In the winter I just bank up that window with straw, and in mild weather I open the inside window and the straw will let in enough air. This cellar just nicely holds 21 hives without tiering up.

Usually about Nov. 10 I put in the bees, and see that they have plenty of air from the bottom, and I aim to put in none but good colonies, but I can't always stick to that rule. I put them on planks on old bee-hives. I don't have any trouble with mice. I just fix the door so they can't gnaw, and keep it shut.

I usually take the bees out about April 1. I never have any mould in the hives, and if they were all in good shape in the fall I don't expect to lose a single colony. There

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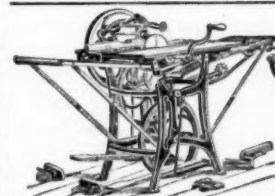
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The **MONETTE Queen-Clipping Device** is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at \$1.00; or for \$1.10 we will mail the Bee Journal one year

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DITTMER'S Comb Foundation

Wholesale and Retail.

Working Wax
INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,
and a full line of SUPPLIES.

I sell the VERY BEST at lowest prices and ship promptly.

Send me your name for 1899 catalog and prices, whether you are a large or small consumer or dealer.

Beeswax always wanted for cash or trade at the highest price. Address,

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ROOT'S GOODS AT ROOT'S
PRICES.

Everything used by Bee-Keepers.
Send for Catalog.

C. H. W. WEBER,
Successor to CHAS. F. MUTH & SON,
2169 Central Ave., CINCINNATI, OHIO.

15A4f Please mention the Bee Journal.

PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus
Honey.

Being the cleanest is usually workt
the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N. Y.

BEE-KEEPERS! Let me send you my 64-
page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

The Best Bargain

IS THE
BEST GOODS AT FAIR PRICES.

And that's the secret of our immense trade that
has made us

HEADQUARTERS IN THE WEST

For Bee-Keepers' Supplies. We are ready now
for the season of 1899 with an immense stock of
the latest and best in our line. Send for our
1899 catalog and discounts for early orders.

Address,

JOSEPH NYSEWANDER,
10A8t **DES MOINES, IOWA.**

Please mention Bee Journal when writing.

SILVER GRAY CARNIOLAN QUEENS—

—ALSO THE—

Golden and 3-banded Italian.

Untested, 50c each; tested, 75c. Purity of stock
and safe arrival guaranteed.

C. B. BANKSTON, - Rockdale, Texas.

13A4f Please mention the Bee Journal.

has not been a day this winter that I, being
a little deaf, could hear them at all.

In September, 1877, I took away all the
queens, which were black, and two days
after I had an expert bee-man introduce
fertile Italians, without a single failure in
21 colonies.

I have been greatly helped by my acquaint-
ance with good bee-keepers, particularly
the late B. Taylor and D. H. Whitmore, of
Minnesota, and S. T. Pettit, of Canada;
and by reading the articles written by the
great bee-men in the American Bee Journal.

I read much of robbing of bees, and of
wax-moths, but I never have any trouble
with a colony that is worth having. Often
there are moths in the honey after it is
taken off, and I always put out in the ap-
iary anything that I want cleaned off.
When I "take up" hives in the fall I ex-
tract the honey from the frames and put
them among the bees, and when they are
well cleaned off I put the frames back into
the hives, and leave them there till needed
again, and I find that by that time the old
pollen will have shrunk so that the bees can
pull it out.

FRANCIS HALL.

Fillmore Co., Minn., March 11.

Very Late Spring.

I have 24 colonies of bees now. The
spring is very late here, with 15 inches of
snow on the ground, and below zero last
night.

C. F. GREENING.

Mower Co., Minn., March 27.

An Experience with Bees.

About 15 years ago I purchast three colo-
nies of bees for \$10. At that time I knew
little about bees.

My bees are situated to the south and
west of my residence. The hives all face
east, and are in rows six feet apart and
three feet apart in the row. They are all,
or nearly all, in chaff hives. The chaff hive,
like all hives, has some good points, and
some people seem to think a great many
poor ones. I talkt with a man who said he
didn't like the chaff hives because the bees
wouldn't start in the morning until the sun
warmed them up. If he had been at my
place last summer, some mornings, before
sunrise, he would have thought that my
bees didn't wait for the sun. Perhaps his
bees don't work before sunrise, but mine
do.

The spring of 1897 found me with 23 colo-
nies, which I increast to 41, and harvested
about 1,500 well-filled sections. My best
colony gave me 100 complete sections.
Passing the winter of 1897-98 without loss,
I increast the 41 colonies the following
summer to 58, and secured 1,200 pounds of
honey, working exclusively for comb,
which sold in my home market at 10 and 12
cents per pound. My honey is all gone,
and I could have sold more if I had had it.

I have tried a great many times to get
subscribers for the American Bee Journal,
but of no avail, as the people had all sorts
of excuses, some thinking they know more
(about bees) than all the bee-editors and
their correspondents put together. One
young man, in particular, bought a number
of colonies last summer. I tried to have
him take the Bee Journal but he did not,
and now he has just one colony alive; but
he has the bee-fever for sure, for he bought
six more at \$3.20 per colony, and a lot of
old hives at 50 or 60 cents apiece, that were
just fit for kindling. My bees were out the
7th, and seemed strong and all right. I
have always been successful in wintering
bees in chaff hives on the summer stands,
but I never could succeed in the preven-
tion of swarming.

My inside hive is the regular 8-frame
dovetail, while the outside is made of ship-
laid siding, the greatest objection being the
cost.

CLYDE CADY.

Jackson Co., Mich., March 20.

Please mention Bee Journal
when writing Advertisers.

FOR SALE.

Fifty (50) colonies of ITALIAN BEES in
standard Langstroth hives in good condition.
Will sell five (5) colonies, or the lot, at \$3.00 per
colony. Also one Given Foundation Press, and
one Cowan Honey-Extractor. For further par-
ticulars inquire of

14A4t **MRS. J. W. LeROY, Rio, Wis.**

Please mention Bee Journal when writing.

BEES QUEENS

Smokers, Sections,
Comb Foundation
And all Apian Supplies
cheap. Send for
FREE Catalogue.

14A4t **E. T. FLANAGAN, Belleville, Ill.**

CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons
that I have this day sold to C. H. W. WEBER,
of Cincinnati, my Honey and Bee-Keepers' Sup-
ply business, known for the past 38 years as
CHAS. F. MUTH & SON. Mr. Weber will con-
tinue to keep on hand at the old stand a full,
up-to-date supply of all goods pertaining to said
business. I beg the customers of the old house,
to whom I wish to extend my thanks, to con-
tinue their patronage with Mr. Weber, by whom
I am sure they will be accorded fair and honest
treatment.

MRS. ANNIE MUTH, Widow.

ALBINO QUEENS If you want the most
prolific Queens—if you
want the gentlest Bees—if you want the best
honey-gatherers you ever saw—try my Albinos.
Untested Queens in April, \$1.00; Tested, \$1.50.
9A26t **J. D. GIVENS, LISBON, TEX.**

EGGS FOR SITTING

Pure-bred
Barred

Plymouth Rock, 15 Eggs for \$1.00.

Superior Rose Comb Black Bantam Eggs, 15 for

\$2.00. No other varieties kept.

Italian-bee keepers being men of good taste
and sound judgment should keep the best and
most profitable kinds of Poultry. Only fresh
eggs used, carefully packed and sent by express.
Safe delivery guaranteed. **D. S. HEFFRON,**
WASHINGTON HEIGHTS, ILL. 13A4f

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WANTED TO BUY A CARLOAD BEES

10-frame Hives and Hoffman Frames preferred.

15A4f **B. WALKER, Evart, Mich.**

Please mention Bee Journal when writing.

2-frame Nucleus with Untested Queen, \$2.25.

Untested Italian Queens, 65 cents each. Ready
May 1, 1899. Have orders bookt now,
and get bees when wanted.

F. J. GUNZEL, Obea, Craighead Co., Ark.
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BEES Wanted for Cash

By pound or colony, in any

hive, box or otherwise.

BEES I WANT—NOT

HIVES. Write at once, and give price, your

location, etc. Address,

C. A. HUFF, Clayton, Lenawee Co., Mich.

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Don't Rent

ESTABLISH A
HOME OF
YOUR OWN

Read "The Corn Belt," a handsome
monthly paper, beautifully illustrated,
containing exact and truthful informa-
tion about farm lands in the West.
Send 25 cents in postage stamps for a
year's subscription to THE CORN BELT,
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WE HAVE NO AGENTS, but have sold to the user direct at factory prices for the past twenty-six years. We ship anywhere for examination. **Everything Fully Warranted.** We are the largest manufacturers of vehicles and harness in the world selling to the consumer exclusively. Our line consists of Rockaways, Surreys, Traps, Phaetons, Stanhopes, Driving Wagons, Top Buggies, Open and Top Road Wagons, Spring Wagons, Delivery Wagons, Milk Wagons, Wagonettes and all styles of Harness.

Send for Large Free Catalogue.

ELKHART
Carriage and Harness Manfg. Co.,
W. B. PRATT, Secy. ELKHART, INDIANA.

This Extension-Top Surrey with double fenders, complete with side curtains, aprons, lamps, and pole or shafts, for \$72.
Just as good as retails for \$110.



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Convention Notices.

Illinois.—The Northern Illinois Bee-Keepers' Association will hold two sessions of its spring meeting, one at Mr. John Wagner's, near Beuna Vista, Stephenson Co., under the supervision of the Vice-President; and one at Mr. Oliver Taylor's, at Harlem, Winnebago Co., in charge of the President, on Tuesday, May 16, 1899. Every one is cordially invited. B. KENNEDY, Sec. New Milford, Ill.

Connecticut.—The annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, May 3, 1899. Waterbury, Conn. MRS. W. E. RILEY, Sec.

THE A. I. ROOT CO'S GOODS Wholesale. Retail.
Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
M. H. HUNT, BELL BRANCH, MICH.

Bee-Supplies.

Root's Goods at Root's Prices.
POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

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**Listen! Take my Advice AND BUY YOUR
Bee-Supplies of August Weiss!**

FINE FOUNDATION AND TONS OF IT. WORKING
Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. Millions of Sections—Polished on both Sides.

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalog and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

1 Dtf

AUGUST WEISS, Hortonville, Wis.

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**Carloads
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Sections,
Shipping-Cases,
Comb Foundation



and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. **INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.**

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**26 cents Cash
paid for Beeswax.**

cept. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

**GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.**

This is a good time to send in your Beeswax. We are paying 26 cents a pound—**CASH**—upon its receipt.

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SENT POSTPAID BY

George W. York & Co. 118 Mich. St. Chicago.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, \$1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, \$1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, \$1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopaedia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, \$1.00.

Bienen-Kultur, by Thos. G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. B. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for \$4.00; 50 for 60c; 100 for \$1.00; 250 for \$2.25; 500 for \$4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

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NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of **Bee-Keepers' Supplies**....

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polished on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equip with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

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Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making the **ONE-PIECE HONEY-SECTIONS**—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List **FREE.**

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FREE FOR A MONTH

If you are interested in Sheep in any way you cannot afford to be without the best and only Weekly Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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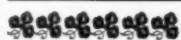
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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, \$2.00 per annum. Sample copy free.

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PRICES OF Bingham Perfect Bee-Smokers AND HONEY-KNIVES.

Smoke Engine (largest smoker made) 4-in. stove.	Doz. \$13.00; each, by mail, \$1.50
Doctor.....3½ in. stove.	Doz. 9.00; " 1.10
Conqueror.....3 in. stove.	Doz. 6.50; " 1.00
Large.....2½ in. stove.	Doz. 5.00; " .90
Plain.....2 in. stove.	Doz. 4.75; " .70
Little Wonder (weight 10 ounces)...	2-in. stove. Doz. 4.50; " .60
Honey-Knife.....	Doz. 6.00; " .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897.

Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

FOREWARNED IS FOREARMED

Do Not Wait until the last moment to order your Supplies. You may be disappointed by delay in shipment and lose a portion of the honey harvest. **Save money and gain honey** by sending us your estimate NOW. We are offering **Special Inducements for Early Orders.** Our 1899 Catalog free.

SPECIAL AGENTS:

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Watertown, Wisconsin.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, April 8.—Choice grades of white, 12@13c; travel-stained and light amber, 10@11c; buckwheat and dark, 7@8c. Extracted, white, 7@8c; amber, 6@7c; dark amber, 5@6c. Beeswax, 26c.

Stocks of white comb honey are about exhausted, and this is as it should be if a market is to be had for the expected large flow of nectar from the season of 1899. R. A. BURNETT & CO.

DETROIT, March 9.—Fancy white comb scarce and higher and we now quote it 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. There is considerable poor honey in the commission houses which is offered at 8@9c. Extracted, white, 6½@7c; dark, 5@6c. Beeswax, 25@26½c. M. H. HUNT.

NEW YORK, March 8.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 6@7c. Comb honey is pretty well cleaned up now and we expect to dispose of the balance of our stock during this month. Excepting California there is not much stock of extracted on our market. Demand is fair at unchanged quotations. Beeswax, 27@28c.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, March 15.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7½@7¾c; light amber, 6¾@7c. Beeswax, 24@26c.

Present slim stocks admit of only a light jobbing business being transacted, with values much the same as previously noted. The coming crop is likely to be small. The bees are now being fed in a large portion of Southern California, and many are reported to have already died.

BOSTON, April 1.—Fancy white, 13c; A No. 1, 12@12½c; No. 1, 11@12c; No. 2, 9@10c; demand fair; no call for dark. Extracted, supply very light, good demand. White in 60-pound cans, 7½c; light amber in barrels, 7c. Beeswax, very light stock, good demand, 29c.

BLAKE, SCOTT & LEE.

KANSAS CITY, April 6.—Fancy white comb honey continues in good demand at 13½@14c; choice white at 12½@13c; dark, 10½@11½c. Extracted scarce at 6½c.

PEYCKE BROS.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

BUFFALO, April 1.—Little or no strictly fancy one-pound comb honey here. It would sell well at about 11@12c. Few lots of common, dark, etc., arriving, and sell at 7@8c mostly; some very poor at 6c. There is no extracted here; worth from 4½@5½c; extra fancy, 6c. Fancy pure beeswax, 30@32c; poor, 25@28c.

BATTERSON & CO.

OMAHA, April 1.—Fancy white quotable at 13@13½c; choice, 12@12½c. Extracted, 6½c.

Quotations are practically nominal, as there is no stock left now in receivers hands, and dealers have also but very little left. There will not be a pound of any kind of honey carried over in this market.

PEYCKE BROS.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.

A. V. BISHOP & CO.

BEST Basswood Honey WANTED.

Write us how much you have, and in what shape, with your lowest price, delivered in Chicago. Address,

GEORGE W. YORK & CO.

118 Michigan St., Chicago, Ill.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

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We make the New
Champion Chaff-Hive

with fence and plain sections, and a full line of other

SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. **R. H. SCHMIDT & CO.,**
SHEBOYGAN, WIS.

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Young Men and Women

It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send \$1.60 for Text Book or 3 cents for catalog

Eclectic Shorthand College,

94 Dearborn Street, CHICAGO.

Headquarters of the Eclectic System.

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BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send \$1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

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I ARISE



To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen ..\$1.00
6 Untested Queens.. 4.50
12 Untested Queens 8.00
1 Tested Queen 1.50
3 Tested Queens 3.50
1 select tested queen 2.00
3 " " Queens 4.00
Select Tested Queen, previous season's rearing, \$3; Extra Selected, for breeding, the very

best, \$5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, \$2.00 extra.
Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,

11A26t Borodino, Onondaga Co., N. Y.
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22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.



We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS, PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

G. B. Lewis Co. Watertown, Wis.
E. Kretschmer. Red Oak, Iowa.
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L. C. Woodman. Grand Rapids, Mich.
J. Nysewander. Des Moines Iowa
Inter-State Mfg. Co. Hudson, Wis.

J. Nebel & Son High Hill, Mo.
G. W. Fassett. Middlebury, Vt.
J. W. Bittenbender. Knoxville, Iowa.
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Pierce Seed and Produce Co. Pueblo, Colo.
F. Foulger & Sons. Ogden, Utah
R. H. Schmidt & Co. Sheboygan, Wis.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, \$1.25, by mail.

Beeswax Wanted

at all times. **CHAS. DADANT & SON,**

Please mention Bee Journal when writing.

Hamilton, Hancock Co., Ill.



For Apiarian Supplies, address **LEAHY MFG. CO.,** Higginsville, Mo.
1730 S. 13th St., Omaha, Neb.
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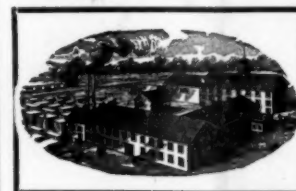
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